CITY OF KIRKLAND BUILDING PERMIT APPLICATION

Permit # _____

Green Certification Level: _____

❑ **NEW COMMERCIAL/INDUSTRIAL/MULTIFAMILY** ❑ **COMMERCIAL ADDITIONS/ALTERATIONS**

❑ **NEW MULTIFAMILY** ❑ **MULTIFAMILY ADDITIONS/ALTERATIONS** ❑ **NEW SITE-BUILT STRUCTURE**

#1 **Site Address:** **Project Name:**

Property Owner _____ Phone _____

Property Owner's Address _____ City, Zip Code _____

Describe Job to be Done _____

_____

#2

Contractor's Name _____ Contractor's Reg. # _____

(Company Name) Expiration Date _____

Contractor's Address _____ State UBI # _____

City, Zip Code _____ Phone _____

OR

I have read RCW 18.27.010 relating to definitions of general contractors and specialty contractors and RCW 18.27.110, which prohibits issuing permits without proof of registration.

OWNER/CONTRACTOR SIGNATURE: _____

#3

Contact Person _____ Daytime Phone _____

Address _____ Alt. Phone _____

City _____ State _____ ZIP _____ Fax _____

Email _____

#4

Sewer District _____ Septic: Yes ☐ No ☐ Water District _____

#5

Total Estimated Project Cost _____ Existing Building Valuation _____

Lender _____

Address _____ Phone _____

#6

Property Tax Account Number (Parcel #) _____

Legal Description _____

_____

Please submit 3 separate 8 ½ x 11 copies of the legal description with this application if it will not fit in space provided above.

#7

Type of Work:

❑ New Commercial Building – Total Building Square footage:_____ ❑ Commercial Addition – Sq ft. added: _____

❑ Commercial Alteration: Scope of work - _____

❑ New Mixed-Use Building (No. of Units_____) - Total Retail/Commercial Square footage: _____

❑ New Multi-Family Building (No. of Units_____) ❑ New 3 Unit Home ❑ Multi-Family Addition

❑ Multi-Family Alteration/Rehabilitative Work

❑ Other _____

(Detention vault, Shoring, Rockeries, New Cellular facility, Comm/Multi-family Swimming pool, Carports, etc.)

I certify under penalty of perjury that the information furnished by me is true and correct to the best of my knowledge and, further, that I am authorized by the owner of the above premises to perform the work for which permit application is made. I further agree to save harmless the City of Kirkland as to any claim (including costs, expenses, and attorney's fees incurred in investigation and defense of such claim), which may be made by any person, including the undersigned, and filed against the City of Kirkland, but only where such claim arises out of the reliance of the City, including its officers and employees, upon the accuracy of the information supplied to the City as a part of this application.

OWNER/AGENT: _____ **DATE**: _____

NOTE: **Permit Applications requiring plan review are accepted Monday-Tuesday-Thursday-Friday 8-4:00, Wednesday 10:30-4:00**

City of Kirkland 123 5th Avenue Kirkland WA 98033 Phone: 425-587-3600 FAX: 425-587-3651

CITY WEB SITE: www.ci.kirkland.wa.us PERMIT INFORMATION: www.kirklandpermits.net ONLINE PERMITS: www.My BuildingPermit.com

MECHANICAL INCLUDED IN PROJECT? ☐ **Yes** ☐ **No**

NOTE: IF MECHANICAL WORK WILL BE DONE, AND IS NOT INCLUDED IN THIS APPLICATION, A SEPARATE PERMIT IS REQUIRED.

PLUMBING INCLUDED IN PROJECT? ☐ **Yes** ☐ **No**

NOTE: IF PLUMBING WORK WILL BE DONE, AND IS NOT INCLUDED IN THIS APPLICATION, A SEPARATE PERMIT IS REQUIRED.

#8 **Number of Mechanical Appliances:**
(G = Natural Gas, E = Electric, OT = Other)

New	Move	Existing		Fuel type	Size (BTU /kW)
____	____	____	Furnace		
____	____	____	Thermostat Wiring		
____	____	____	Unit Heater/Wall Heater		
____	____	____	Vent Fans		
____	____	____	AC Units _____ tons		
____	____	____	Boilers/Compressors		
____	____	____	Air Handlers,_____CFM		
____	____	____	Commercial Hoods		
____	____	____	Woodstoves/Fireplaces		
____	____	____	Clothes Dryers		
____	____	____	Ranges		
____	____	____	Log Lighters/BBQ's		
____	____	____	Gas Fireplace Insert		
____	____	____	Other		

Estimated cost, mechanical portion only (excluding fire protection and plumbing) $_____

#9 **Number of Plumbing Fixtures (including rough-ins):**

New	Move	Existing	
_____	_____	_____	Interior Plumbing Lines
_____	_____	_____	Tub or Tub/Shower Combo
_____	_____	_____	Shower (Stand Alone)
_____	_____	_____	Kitchen Sink
_____	_____	_____	Laundry Sink
_____	_____	_____	Bar Sink
_____	_____	_____	Lavatory (Bathroom Sink)
_____	_____	_____	Clothes Washer
_____	_____	_____	Dishwasher
_____	_____	_____	Water Closet (Toilet)
_____	_____	_____	Urinal
_____	_____	_____	Bidet
_____	_____	_____	Hose Bib
_____	_____	_____	Water Heater
_____	_____	_____	Floor Drain
_____	_____	_____	Floor Sink
_____	_____	_____	Mop Sink
_____	_____	_____	Medical Gas
_____	_____	_____	Water Meter Size
_____	_____	_____	Trap Primer
_____	_____	_____	Grease Trap
_____	_____	_____	Waste Interceptor
_____	_____	_____	Other Fixtures
_____	_____	_____	Water Service Line (ft) _____
_____	_____	_____	Water Service Size
_____	_____	_____	Backflow Prevention Assembly
_____	_____	_____	**TOTAL FIXTURES:** _____

#10 **Water Department Service**
(proposed) Meter Size _____

#11 **Sewer Service**
Side Sewer Contractor
_____
Contractor's Address
_____
City, Zip _____ Phone_____

#12 **Street Use**
Contractor's License No. _____Work to be done: _____

#13 **Will significant trees be removed as part of this project? How many?** _____ 4 copies of the Site Plan are required with this application. The Site Plan must show all of the significant trees, and you may be required to provide a certified arborist report. See the 2006 Tree Regulations (attached) for Tree plan II for new Commercial/Industrial, commercial Tenant Improvement, and Multi-Family construction, or contact the Planning Department (425-587-3225) for further guidance regarding tree retention regulations.

#14 By signing this application, I authorize employees/agents of the City of Kirkland to enter onto the property which is the subject of this application during regular business hours. The sole purpose of entry is to make any examination of the property which is necessary to process this application.

Please complete #15 if adding plumbing fixtures (including rough-ins)

#15 Water Supply Piping

A. Fixture Units: Number of Fixtures x Fixture Unit multiplier = Total Fixture Units (Public or Private)

B. Distance from meter to most remote outlet: _____ feet.

C. Difference in elevation between meter and highest fixture: _____ feet above meter or _____ feet below meter.

D. Pressure in street main: _____ psi. (Measure with pressure gauge or check with water district).

	Public		Private – Multi-Family 3 Dwelling Units or more		Total Fixture Units
Plumbing Fixtures	**Heavy Use Assembly**	**General Use**	**Total dwelling unit counts**		
Bar Sink		_____ x 2.0		_____ x 1.0	
Bathtub or Combination Bath/Shower - 1/2" Branch		_____ x 4.0		_____ x 4.0	
Bathtub or Combination Bath/Shower - 3/4" Branch		_____ x 10.0		_____ x 10.0	
Bidet		_____ x 1.0		_____ x 1.0	
Clinic Sink		_____ x *			
Clotheswasher, Domestic		_____ x 4.0		_____ x 4.0	
Dental Unit, Cuspidor		_____ x 1.0			
Dishwasher, Domestic		_____ x 1.5		_____ x 1.5	
Drinking Fountain or Water Cooler	_____ x 0.75	_____ x 0.5		_____ x 0.5	
Hose Bibb, First		_____ x 2.5		_____ x 2.5	
Hose Bibb, Each Additional		_____ x 1.0		_____ x 1.0	
Kitchen Sink, Domestic		_____ x 1.5		_____ x 1.5	
Laundry Sink		_____ x 2.0		_____ x 1.5	
Lavatory (Bathroom Sink)	_____ x 1.0	_____ x 1.0		_____ x 1.0	
Service Sink or Mop Basin		_____ x 3.0		_____ x 1.5	
Shower (List Each Head)		_____ x 2.0		_____ x 2.0	
Urinal, 1.0 GPF Flushometer - See 610.10	_____ x 5.0	_____ x 4.0			
Urinal, Flush Tank	_____ x *	_____ x 2.0		_____ x 2.0	
Wash Fountain, Circular Spray		_____ x 4.0			
Washup Sink, Each Set of Faucets		_____ x 2.0			
Water Closet, 1.6 GPF Gravity Tank	_____ x 3.5	_____ x 2.5		_____ x 2.5	
Water Closet, 1.6 GPF Flushometer Valve - ½" Branch	_____ x *	_____ x *		_____ x *	
Water Closet, 1.6 GPF Flushometer Valve 1" Branch –see 610.10	_____ x *	_____ x *		_____ x *	

* **Refer to Table 6-4, 2003 UPC**

Total Fixture Units:	
Total if Using Table L-1:	

☐ Hydraulic Analysis attached

Plumbing Appendix L Table L-1 may be used for Multifamily 3 or more dwelling units instead of the multiplier above (L-1 worksheet next page)

Number of plumbing fixtures must be entered in table above on all applications – you do not have to complete the multiplier when using Table L-1.

OFFICE USE ONLY (PLEASE DO NOT WRITE BELOW THIS LINE)

MINIMUM METER SIZE: _____ INCHES MINIMUM BUILDING SUPPLY: _____INCHES PRV. NEEDED? YES_____ NO_____

CITY OF KIRKLAND
UNIFORM PLUMBING CODE – WATER SUPPLY FIXTURE UNITS
ALTERNATE PLUMBING SYSTEMS – TABLE L-1

Serving 3 or more Dwelling Units

Bathroom Groups having 1.6 GPF Gravity or Pressure Tank Water Closets	**Number**			**Total Units**
*Half-Bath or Powder Room	_____	x	2.5	_____
*1 Bathroom Group	_____	x	3.5	_____
*1 ½ Bathrooms	_____	x	6.0	_____
*2 Bathrooms	_____	x	7.0	_____
*2 ½ Bathrooms	_____	x	8.0	_____
*3 Bathrooms	_____	x	9.0	_____
**Pick the group that most describes the overall housing unit from the list above.*				
*** Then add from choices below for additional Bathrooms or ½ baths:*				
**Each additional ½ Bath	_____	x	0.5	_____
**Each additional Bathroom Group	_____	x	1.0	_____
**Bath Group (1.6 GPF Flushometer Valve)	_____	x	4.0	_____
Kitchen Group (Sink and Dishwasher)	_____	x	1.5	_____
Laundry Group (Sink and Clothes Washer)	_____	x	3.0	_____
Additional units not on Table L-1				
Bidet	_____	x	1.0	_____
Bar sink	_____	x	1.0	_____
Hose Bib, First	_____	x	2.5	_____
Hose Bib, Each Additional	_____	x	1.0	_____
Additional Units not listed, use table 6-4 for fixture count	_____	x		_____
	Total Fixture Units			_____

Notes:

1. A bathroom group, for the purpose of this table, consists of one water closet, up to two lavatories, and either one bathtub or one shower.

2. A half-bath or powder room, for the purposes of this table, consists of one water closet and one lavatory.

3. See Appendix L for scope and application of alternate plumbing systems.

CITY OF KIRKLAND
Development Services
123 Fifth Avenue, Kirkland, WA 98033 425.587.3000
www.ci.kirkland.wa.us

City of Kirkland Survey Policy

Because many construction projects in the City of Kirkland are constructed to the minimum setbacks and maximum heights, accurate survey information is needed for City Staff to review plans and conduct inspections. The following Building Permit submittals shall include signed and stamped Property Line (Boundary) and Topographic Survey documents prepared by a Washington State Licensed Surveyor. A copy of an existing survey document may be used if it is legible and includes a signed surveyor's stamp and the original survey markers are still in place. If survey information is required but not provided, the permit application will not be accepted.

Property Line (Boundary) Surveys – The purpose of a property line survey is to assure that the required setbacks are complied with. The setbacks are measured from the property line to the outermost finish material of the exterior walls of the house. A Property Line (Boundary) Survey is required with the following types of Building Permits:

A. New commercial/multi-family structures;
B. Additions to commercial/multi-family structures;
C. New single family residences and Two Unit homes; and/or
D. Single family additions and single family accessory buildings.

*Exception: A Property Line (Boundary) Survey is not required for residential deck additions or modifications. A Property Line (Boundary) Survey is also not required with Building Permits for single-family additions or single-family accessory buildings if **all** of the following conditions are met:*

A. The structure is a least two feet away from all affected required building setback lines; and
B. The assumed property line is marked by a fence or other similar feature; and
C. There are no known property line disputes regarding the specific property line.

Topographic Surveys - A Topographic Survey with two foot contour intervals is required with the following types of Building Permits:

A. New commercial/multi-family structures;
B. Additions to commercial/multi-family structures;
C. New single family residences and Two Unit homes; and/or
D. Single family additions and single family accessory buildings.

*Exception: A Topographic Survey is not required with a Building Permit for a new single-family residence, single-family addition, single-family accessory building, or commercial or multi-family additions less than 1000 square feet if **one** of the following conditions is met;*

A. The lot is essentially level – there is no grade change greater than two feet between property corners; or
B. The building footprint (excluding uncovered decks) is changing less than 25%, the height of the addition does not exceed the height of the existing roof line, and the addition is not being made on a part of the property that is topographically lower than the existing building; or
C. The proposed building is designed to be two or more feet less than the maximum building height allowed for the property.

Building Height Field Verification - Building Height Field Verification is required for any building that is designed within one foot of the maximum building height allowed for the property. The Field Verification shall comply with the following:

A. The verification will be required at the time of the first floor underfloor inspection; and
B. The verification will be conducted by a Licensed Surveyor**; or
C. The verification will be conducted by the contractor using their own survey equipment in the presence of the building inspector if the contractor can demonstrate that the height is correct based on the measurement from the approved benchmark.

Note: When a contractor is verifying the height with their own survey equipment, the contractor shall have the equipment set up at least 30 minutes prior to the arrival of the Building Inspector. If the equipment is not set up, the contractor will need to reschedule the inspection for the following day.

**If the building is designed within one inch of the height limit, then a Licensed Surveyor shall verify the height.

BUILDING HEIGHT TABLE

(Applicant Must Complete)

MAXIMUM HEIGHT OF STRUCTURE ALLOWED see KZC 5.10.357 and applicable Use Zone Chart	BENCHMARK LOCATION AND DESCRIPTION (be specific)	BENCHMARK ELEVATION	FINISHED FIRST FLOOR ELEVATION	HEIGHT DIFFERENCE BETWEEN BENCHMARK AND FINISHED FIRST FLOOR ELEVATIONS	AVERAGE BUILDING ELEVATION (ABE) see KZC 115.59	ELEVATION OF HIGHEST POINT OF ANY ELEMENT OR FEATURE see KZC 115.60 for exceptions

Staff Use Only:

Building Height Field Verification is required: Yes or No (circle one)

If yes,
Building Height Field Verification by Licensed Surveyor (if within 1" of height limit): Yes or No (circle one)

COMMERCIAL/INDUSTRIAL/MULTIFAMILY
PERMIT APPLICATION REQUIREMENT CHECKLIST

The City of Kirkland highly recommends that applicants schedule a Pre-Submittal Conference meeting for all new commercial, multi-family, additions to commercial/multifamily projects, all restaurants, Automobile dealers, and complex tenant improvements. These meetings are intended to help the applicant prepare the proper materials and familiarize the applicant with Kirkland regulations. Please call the Building Department at 425-587-3600 for further information about these meetings. Pre-Submittal Conference meetings are required for most Land Use permits. Contact the Planning Dept. 425—587-3225 for more information.

The following steps must be taken in order to properly apply for a Commercial/Industrial/MultiFamily building permit:
When submitting a permit application for a new or addition to a Commercial/Industrial/Multifamily building, a completeness meeting must be scheduled prior to submittal. These meetings are scheduled on a First-Come First-Served basis on Tuesday at 11:00am or on Thursdays at 1:30 pm and 2:30 pm, and must be made one week in advance. Please call 425-587-3600 to schedule.

For new buildings or external changes to existing structures located in one of the following zones: CBD, NRHBD, RHBD, TLN, JBD, or MSC, Design Board review (DBR) or Administrative Design Review (ADR) and compliance with the design regulations of Zoning Code Chapter 92 may be required. If ADR is required, include a completed ADR Supplemental Checklist form with your building permit application describing compliance with Chapter 92, KZC (available in the Planning Department or at www.kirklandpermits.net). If located in the Rosehill Business District, an exterior lighting plan may be required. See exterior lighting requirements (attached) if applicable. Prior to submitting a building permit application, contact the Planning Department at (425) 587-3225 for more information.

- ☐ Completed application for building/plumbing/mechanical permit (*one for <u>each</u> building, detached garage, and/or carport).* All plumbing/mechanical fixtures must be included with original application.
- ☐ Completed Building Code Summary worksheet when submitting for new Commercial, Industrial, and Multifamily or new square footage to same. Not required for Commercial Tenant Improvements or Multifamily alterations.
- ☐ Legal description of property *(2 copies, 8-1/2" x 11" paper)*
- ☐ Contractor's UBI number and a copy of contractor's registration card prior to issuance of building permit
- ☐ Lender/bonding information to include agency name, address, phone number (for projects costing more than $5,000)

Three (3) complete sets of plans with 4th copy of site plan. *(maximum drawing size of 24" x 36" Exception: large buildings where scale exceeds 1/16")* architects/engineers "wet signed" registration stamp must appear on plans and calculations prepared by such professionals and include the following:

- ☐ (A) Permanent storm water retention system including calculations
- ☐ (B) Interim storm water retention system
- ☐ (C) Copies of survey of the property involved
- ☐ (D) Landscaping plans
- ☐ (E) Cover sheet indicating: Occupancy Group, Type of Construction, Square Footage by Floor, and General Notes
- ☐ (F) A CAD drawing file (plans tied to the Washington State plane coordinate system – North American Datum 1983) drawn to scale showing:
  - (1) Building outline
  - (2) Access ways (e.g., main roads, driveways, parking areas, etc.)
  - (3) Stair shaft enclosure and points of discharge
  - (4) A directional symbol with north at the top or right of the page
- (G) A plot plan drawn to 1"=20' scale showing:
  - ☐ (1) Property lines
  - ☐ (2) Location and dimensions of proposed building(s) including distance to property line
  - ☐ 3) Location and dimensions of existing structures
  - ☐ (4) Roof overhangs of existing and new buildings

- ☐ (5) Locations of all curb cuts (access of public rights-of-way) including distances to adjacent intersections and existing fire hydrants, open ditch, culvert, pipes, etc.). Type of surface proposed and finished grades or profiles of driveways.
- ☐ (6) Proposed location of sanitary sewer service line, water service line, storm drainage lines, and connection to existing systems.
- ☐ (7) Parking facilities layout and lighting, including garbage and recyclable materials container locations and screening plan, handicap parking compliance, and emergency vehicle access.
- ☐ (8) Existing topography at 5-foot intervals
- (9) **Show all Significant trees** (at least 6" in diameter at breast height: DBH) on the property and on or near the adjacent right-of-way. Label the tree size and type. Show tree drip line and protective tree fencing and protection notes. If the property does not have significant trees, please indicate.
- ☐ **NOTE: Applicant should check with the Department of Planning and Community Development to determine what tree retention requirements have been established for the subject property.** All designated trees to be retained must be prominently marked and fenced, and the tree fencing inspection completed and signed off in the City's permit-tracking system prior to issuance of the building permit. Call 425-587-3225 to schedule this inspection, provide the Permit Application number and construction address, and allow 2 days time for this inspection to be completed and signed off.
- ☐ (10) Building and lot corner elevations, and midpoint elevation of each wall segment at existing grade
- (11) Elevation and location of datum point in the right-of-way
- ☐ (12) Water courses, wetlands, or other natural features
- ☐ (13) For multifamily include location and dimensions of common recreational open space

☐ (H) (Average building elevation calculations (see attached handout)

☐ (I) Complete floor plan of each floor drawn to 1/4" scale showing compliance with IBC and WAC 51-30, including:

- ☐ (1) Room size compliance with building code
- ☐ (2) Required fire walls and doors
- ☐ (3) Mechanical equipment locations. Structural design calculations are required by a licensed architect or engineer to verify the adequacy of the roof. Rooftop equipment must be screened to be architecturally compatible with the existing building.
- ☐ (4) Plumbing fixture locations
- ☐ (5) Dropped ceiling areas
- ☐ (6) Stairway locations
- ☐ (7) Door and window locations

☐ (J) Elevations of all sides of the building drawn to 1/4" or 1/8" scale. Information to be shown on elevations:

- ☐ (1) Elevations of all sides of the building drawn to 1/4" or 1/8" scale showing building heights and where the average building elevation strikes the structure; existing and finish grade; and roof mounted mechanical equipment and screening.

☐ (K) Complete structural details and supporting calculations. Drawings to be of 1/4" or 1/8" scale and stamped by structural engineer. Include the following:

- ☐ (1) Complete cross section
- ☐ (2) Foundation plan. Show under-floor ventilation, access, and framing, if pertinent
- ☐ (3) Floor and roof framing plans, including columns and shear walls
- ☐ (4) Manufacturer and truss layout, if trusses are used
- ☐ (5) Detail stairways, **to show code compliance**
- ☐ (6) Detail guard rails around balconies, etc.
- ☐ (7) Detail cantilevered beams, floor, or ceiling joists
- ☐ (8) Plans for buildings more than two stories in height of other than Group R, Division 3 and Group U occupancies shall indicate how required structural and fire-resistive integrity will be maintained where penetrations will be made for electrical, mechanical, plumbing, and communication conduits, pipes, and similar systems.

- ☐ (L) Complete Commercial Energy Code forms 1 through 4 as applicable for compliance with ventilation and Air Indoor Quality Code (AIQ) 51-13, Washington State Energy Code 51-11 WAC.
- ☐ (M) Lot Coverage Calculations - percentage of lot covered by structures, parking areas, and other impervious surfaces.
- ☐ (N) Report prepared by a professional engineer may be required if development will occur on or within 25 feet of a regulated slope or on an area containing soft compressible soils (two copies).
- ☐ (O) Complete Environmental Checklist (SEPA) and traffic impact analysis, if not exempt, along with SEPA review fee (see Planning Department for more information).
- ☐ (P) Copy of Road Concurrency Test Notice from Public Works Department. (Exempt from concurrency if exempt for SEPA.) Road concurrency must be passed prior to submittal of permit application. (See Traffic Engineering Section of Public Works Department for more information.)

NOTE: New Restaurant/ Food Facility Construction: Applicant is required to send two set of plans, drawn to scale and detailing establishment equipment to the King County Department of Public Health. Any questions regarding this requirement may be directed to Mike Bratcher at 206-296-9741 between 7:00 am and 3:30 pm, Monday through Friday. Stamped Health Department copy must be submitted to Building Department prior to issuance of permit.

NOTE: Multiunit Residential Building or for Rehabilitative Construction The building department shall not issue a building permit for construction of the building enclosure of a multiunit residential building or for rehabilitative construction unless the building enclosure design documents contain a stamped statement by the person stamping the building enclosure design documents in substantially the following form: "The undersigned has provided building enclosure documents that in my professional judgment are appropriate to satisfy the requirements of RCW 64.55.005 through 64.55.090."

NOTE: When Applications expire Permit application and plan review fee will need to be resubmitted if the permit applied for has not been obtained within 18 months of submittal date. It will also require a re-review of the project by all affected city departments.

NOTE: You must contract with Sno-King/Waste Management N.W. for collection of construction waste. Please call 425-814-1695 for information. Kirkland Municipal Ordinance 16.08.030

Any revisions required by any department should be submitted to the Building Department for processing. All changes should be "clouded", and any architect or engineer must wet-sign the revised plans.

CITY OF KIRKLAND
PLANNING & COMMUNITY DEVELOPMENT
123 5th Avenue, Kirkland, WA 98033 425.587.3225
www.ci.kirkland.wa.us

Tree Plan II – Multi-Family, Commercial, Land Surface Modification, and Other Non-Residential Uses

Trees and other vegetation are important elements of the physical environment which protect public health, safety and general welfare in a variety of ways. These regulations establish a process and standards to provide for the protection, preservation, replacement, proper maintenance and use of significant trees, associated vegetation and woodlands located in the City of Kirkland. **For Multi-Family, Commercial and other non-residential uses, the regulations require retention of viable trees within the required setbacks and landscape buffers. These requirements are discussed in Section 95.35.2.B.2 of the Kirkland Zoning Code (KZC) and are summarized below.**

Helpful terms to complete the tree plans described below:

1. **Significant Tree**: A tree that is at least 6 inches in diameter at breast height (DBH) (The diameter or thickness of a tree trunk measured at 4.5 feet from the ground).
2. **Dripline**: The distance from the tree trunk that is equal to the furthest extent of the tree's crown.
3. **Impact:** A condition or activity that affects a part of a tree, including the trunk, branches, and critical root zone.
4. **Qualified Professional**: An individual that possesses and demonstrates the ability to perform tree risk assessments and prescribe appropriate measures necessary for the preservation of trees during development; must at a minimum be certified by the International Society of Arboriculture (ISA).
5. A **Type 1 Tree** is a viable tree that meets at least one of the following criteria:
    i. Landmark tree (pre-designated);
    ii. Specimen tree (very good to excellent condition and free of major defects);
    iii. Tree groves and associated vegetation to be set aside as preserved groves;
    iv. Trees on slopes of at least 10%; or
    v. Trees that are a part of a grove that extends into adjacent property.

Permit Submittal Requirements - Multi-Family, Commercial and Non-Residential

The following information is required for all permits in order for the application to be deemed complete. Incomplete applications will not be accepted.

Tree Plan II is required for a development permit or land surface modification resulting in site disturbance and impact to a significant tree in required yards and areas for required landscaping for:

- Three or more detached, attached, or stacked dwelling units
- Any use other than residential

A. The following general information must be incorporated on the site plan:
    1. Accurate location of all public trees (i.e. street trees) and private significant trees and their driplines measured relative to visible site features. Please number all trees (tag in field and label on plan) for reference purposes. *If the trees are not accurately located on a site plan, the Planning Official may require that their locations be surveyed.*
    2. Size (DBH) and species (or at least type) of the significant trees;
    3. General health of these trees; and
    4. Approximate trunk location and dripline of significant trees that are on adjacent property with driplines extending over the subject property line.

B. If there are significant trees in the right-of-way, required yards (setbacks) or areas for required landscaping or potential areas for required landscaping (i.e. parking lots), the tree plan must include a report from a qualified professional containing the following information:
    1. Size and species of these trees (located in these areas);
    2. A complete description of each tree's health and viability. If a tree is not viable for retention, the reason(s) must be soundly based on health, high risk of failure due to structure, defects, unavoidable isolation (windfirmness), or suitability of species and for which no reasonable alternative action is possible (pruning, cabling, etc.). The impact of necessary tree removal to remaining trees, including those in a grove or on adjacent properties, must also be discussed.
    3. The location of limits of disturbance around all trees potentially impacted by site disturbances and any special instructions for work within that protection area (hand-digging, tunneling, root pruning, maximum grade change).
    4. A discussion of timing and installation of tree protection measures that must include fencing and be in accordance with the Tree Protection Standards as outlined in KZC 95.35.6.

C. Site Design and Retention Requirements
    1. The applicant shall pursue applicable variations to development, as outlined in KZC 95.35.4.A.2 and 95.35.4.A.3, for the retention of Type 1 trees where feasible in required yards and landscaping areas.
    2. If removal of a Type 1 tree in required landscaping areas is proposed, the applicant shall provide reasons for the proposed removal that may require assistance from a qualified professional.
    3. Sites shall comply with required landscaping pursuant to KZC 95.40. Preserved trees in required landscaping areas shall apply toward required landscaping requirements.

D. Final Plan Requirements
    1. Demolition and grading plans shall depict tree protection measures, as recommended by a qualified professional, if existing trees are to be retained and their driplines are within the area of disturbance.
    2. Landscape Plans shall show all retained trees.
    3. The applicant shall enter into all required tree preservation and maintenance agreements pursuant to KZC 95.50.

Note: This is an overview of tree requirements, for more details and information visit our website at http://www.ci.kirkland.wa.us/depart/planning/trees.htm or request a copy of Ordinance 4010.

BUILDING CODE SUMMARY WORKSHEET
COMMERCIAL, INDUSTRIAL, &
MIXED USE OCCUPANCIES

123 Fifth Ave Kirkland WA 98033 phone 425-587-3600 fax 425-587-3651

This form details the minimum information we need in order to review your project for compliance with the building codes. To begin your review, we require that this worksheet be completed and turned in with your Building Permit application.

You are required to include the necessary full sized sheet(s) with the drawing set, detailing this information. The code summary is required to be an integral part of the drawings, and these code summary pages designated as **CS (**Code Summary) sheets.

BUILDING CODE EDITION: 2006 IBC

Green Certification Level: _____

SECTION 1 – BUILDING USE OR OCCUPANCY

Identify all use and occupancy classification group(s) in the Building *(i.e. B, M, R-2, A-3, etc.):*						

List all occupancy separation fire barrier ratings required (i.e. B to S-2 = 2hr), IBC 508 Include both horizontal and vertical separations **And** Provide mixed use ratio calculations per 508 **Or** Building is constructed per IBC 508.3.2 for Non-Separated Uses or IBC 509 Special Provisions (Circle if using either provision)	to	=	hr(s)
	to	=	hr(s)
	to	=	hr(s)
	to	=	hr(s)
	to	=	hr(s)

List all incidental use areas (per IBC Table 508.2), floor area, and separation to be provided

Room or Area	Floor Area (Square Ft.)	Fire Separation

List all accessory use areas not defined as Incidental Use, and fire barrier requirements (per IBC 508.3.1)

Room or Area	Floor Area (Square Ft.)	Percentage of floor area on story	Fire Separation

SECTION 2 – BUILDING CONSTRUCTION

List Construction Type(s) used in the design (IA, IIIB, VA, etc.):		
	Allowed	**Proposed**
Building Height (per IBC Table 503)		
Number of Stories (per IBC Table 503)		

Are Automatic Sprinklers used for Height Modifications? (per IBC Section 504)	**YES**	**NO**

Is there a basement?	**YES**	**NO**	**If YES, List square footage of basement and grade elevations on CS sheets.**

Is an Automatic Sprinkler System Used in Place of 1-Hour Construction? (per IBC Table 601, footnote e.) or other fire resistive construction per IBC 601 footnote c.? if so provide locations on CS sheets.	**YES**	**NO**

Fire Resistance of Exterior Walls Based on Fire Separation Distance (per IBC Table 602)				
	List Wall Location (i.e. North, South, etc.)	**Fire Separation Distance:**	**Rating**	**Opening Protection**
1				
2				
3				
4				

Fire Resistance Rating Requirements (per IBC Table 601)	**Rating Required**	**Rating Provided**	**Assembly #**
Structural Frame			
Bearing Walls - Exterior			
Bearing Walls - Interior			
Nonbearing Walls & Partitions - Exterior			
Nonbearing Walls & Partitions - Interior			
Floor Construction			
Roof Construction			

SECTION 3 – OCCUPANT LOAD AND BUILDING EXITING

If there are multiple IBC Occupancy types on any floor or in the building, provide a separate analysis for each occupancy type. Repeat as necessary.

	Basement	**First Floor**	**Mezzanine**	**Second Floor**	**Third Floor**	**Other Floor(s)**
TOTAL Occupant Load						

Number of Exits and Exit Width from Each Level (as applicable):	**Number of Exits**		**Exit Width**			
			Stairs		**Other Egress Components**	
	Required	**Provided**	**Required**	**Provided**	**Required**	**Provided**
Basement						
First Floor						
Mezzanine						
Second Floor						
Other Floor(s)						
Are Areas of Refuge Required?					**YES**	**NO**

SECTION 4 – BUILDING AREA LIMITATIONS: "ALLOWABLE" AND "ACTUAL"

If there are multiple construction types, or if a fire wall divides the building, **provide a separate analysis for each area.** Repeat as necessary.

Area Limitations for Each Proposed IBC Use or Occupancy Group	Occupancy - 1	Occupancy - 2	Occupancy - 3	Occupancy - 4
IBC Use / Occupancy Group				
Table 503 Area Limitation (per IBC Table 503)				
Frontage Area Increase Multiplier (per IBC 506.2 equation 5-2 provide on CS sheet)				
Automatic Sprinkler System Area Increase Multiplier (per IBC 506.3 provide on CS sheets)				
Total ALLOWABLE Floor Area (Equation 5-1 / IBC 506.1)				
Actual Floor Area				
Total ALLOWABLE Building Area (per IBC 506.4)				
Does the Building Qualify for Unlimited Area (per IBC 507)			YES	NO

*If there is more than one occupancy group in the building, provide a "Sum of the Ratios" calculation (per IBC 508.3.3.2) to show that the proposed building is not over the allowable area.
(Not Required if Building is constructed per IBC 508.3.2 for Non-Separated Uses)

"Sum of the Ratios" Allowable Area Calculation (if applicable)
"Non-Separated Use" Allowable Area Calculation (if applicable)

SECTION 5 – PLUMBING FIXTURE COUNT
(WAC 51-50 – IBC Chapter 29 - Washington State Amendments)

Occupancy[1] & Area Served	Plumbing Occupant Load Factor	Plumbing Occupant Load[2]	Water Closets				Lavatories			
			Male		Female		Male		Female	
			Required /	Provided	Required /	Provided	Required /	Provided	Required /	Provided
Total Number of Fixtures	**Required**									
	Provided									
	Accessible									

Unisex Toilet (per IBC 1109.2.1)	**Required**	
	Provided	
Number of Drinking Fountains	**Required**	
	Provided	
	Accessible	

[1] Occupancy is determined based on 2006 International Building Code WAC 51-50 Section 2902.1

″ Equally divide the plumbing occupant load between male and female for determining the number of required plumbing fixtures.

SECTION 6 – CODE SUMMARY FLOOR PLAN(S)
Provide a basic floor plan for each level, showing partitions, stairs, doors with door swings, relites, fixtures, etc. Minimum scale is 1/8” = 1’ – 0”

Drawing Sheets shall be designated as **CS** (Code Summary)

1. Clearly label the following:
   a. Use of each room or area (i.e. office, sales, conference, kitchen, manufacturing, etc.)
   b. IBC Occupancy classification for each room or area and floor.
   c. Square footage of floor area of each room or area.
   d. Occupant load factor used for each room or area and floor.
   e. Occupant load of each room or area and floor.
2. Provide a total occupant load summary for each floor or level.
3. Clearly show all actual and assumed property lines, including those required by IBC 704.3.
4. Graphically show the extent and rating of all rated assemblies both vertical and horizontal, include the rating of any required opening protection.
5. Clearly show a complete Means of Egress Path, including the width, common path of travel, travel distance, diagonal distance of exits, exit signs, and emergency exit pathway lighting.
6. Indicate any doors that are provided with panic hardware and/or magnetic hold-opens.
7. Provide accessible information for site and all parts of the building.
8. Provide occupant load sign requirements for all assembly areas.
9. Provide interior Wall finish and trim requirements in accordance with IBC Table 803.5.
10. Provide complete list of Hazardous Materials and show storage location.

City of Kirkland

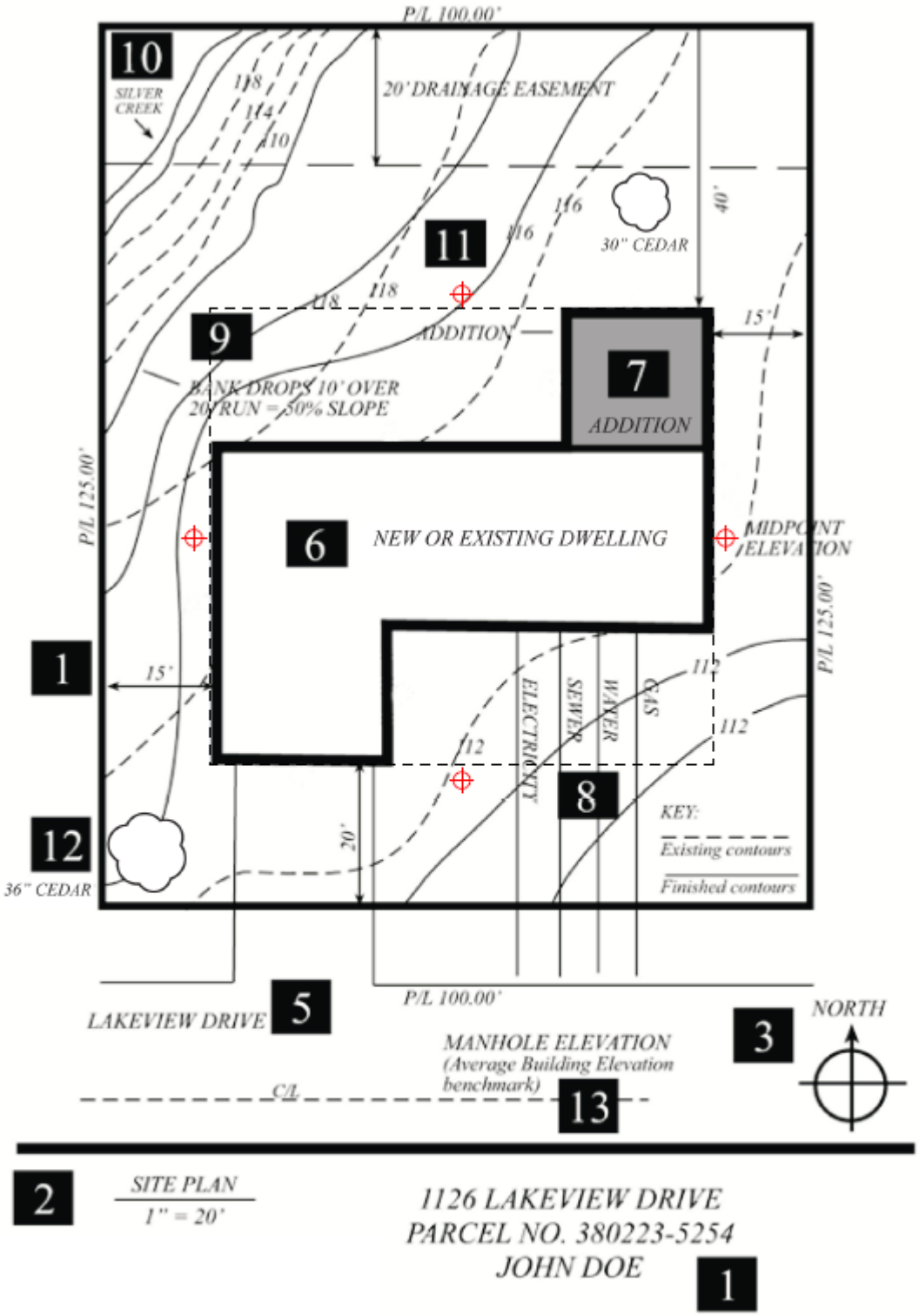
Fire/Building Department • 123 Fifth Avenue • Kirkland, WA 98033 • 425-587-3600

Site Plan General Requirements

Many different permits ***require*** a site plan (sometimes called a "plot" plan), which is a detailed and accurate map of the subject property. A complete and accurate site plan, drawn to scale, is important to avoid delays in the review and approval of your project. A complete site plan will include all the site features and information (depending on your site, of course) listed below. **On the next sheet** is a typical site plan.

1	The property owner's **name**, the assessor's **parcel number** and the site's **address**.	8	Locations of **sewer**, **water**, **electricity**, and **gas** lines, and any **underground storage tanks**.
2	The map **scale**. A scale of 1"=20' is typical, but others, 1/8"=1'0" for example, are also acceptable.	9	Any **steep slopes** (15% or greater) and/or **fill** areas.
3	A **north arrow** indicating direction north.	10	All **surface water** (creeks, streams, ponds, wetland, etc.) within 100 feet of the property.
4	All **property lines**, all **easements** (utilities, access, etc.), and site **dimensions**. Show the **distances** between buildings, and from buildings to all property lines.	11	Accurate existing and finished **topography** of site shown with 2-foot contour intervals.
5	All **streets** and **alleys**, with **street names**. Show all existing and/or proposed **driveways** (include surface materials).	12	Location, type and diameter of **significant trees**. See Planning Department 2006 Tree regulations for **Tree Plan** requirements. 425-587-3225
6	The location and dimensions of all **existing** and **proposed** buildings. Identify each building by its use (garage, residence, etc.). Include **decks**, **retaining walls** and **rockeries**, and the like.	13	**Relevant Average Building Elevation** information, including midpoint and benchmark elevations.
		14	**Lot coverage** and supporting calculations. (Can be on a separate sheet.)
7	Clear distinction between **existing** buildings and **proposed new or addition**. Show any buildings to be **demolished.**	15	**Erosion and Sedimentation Control** plan required on site per example ESC plan (Obtain from Public Works Department.)
NOTE:	Separate demolition permit/s required.	16	**In Rose Hill Business District,** an Exterior Lighting Plan is required. See requirements checklist attached for details.

SAMPLE SITE PLAN



SAMPLE SITE PLAN

- **Lot coverage** and supporting calculations. Can be on a seperate sheet.
- **FAR (Floor Area Ratio)** and supporting Calculations. Can be on a seperate sheet.
- **Erosion and Sedimentation Control plan** required on site per example ESC plan (attached).
- **Show structures to be demolished.** Describe structures to be demolished.

CITY OF KIRKLAND

PCD

DEPARTMENT OF PLANNING & COMMUNITY DEVELOPMENT

Rose Hill Business District
Exterior Lighting Requirements

All non-residential (i.e. office or retail uses), medium to high density residential, or mixed use development located in RH zones within the Rose Hill Business District, are subject to the exterior lighting requirements of Zoning Code Section 115.85. The following explains the exterior lighting requirements and submittal requirements for building permit applications.

Submittal requirements

As part of a building permit application, the applicant shall submit sufficient information in the form of an exterior lighting plar to enable the Planning Official to determine that the provisions of KZC Section 115.85 will be satisfied:

The exterior lighting plan shall include at a minimum, the following information:

☐ A site plan and elevation drawings showing proposed exterior lighting on private property including:
- location of light fixtures and fixture type
- mounting height of all light fixtures on building exteriors, light fixtures on poles in parking or storage areas
- luminance levels of the lighting in footcandle measurements
- aiming point of exterior lighting fixtures
- time lights will be turned off in evening hours
- Identitfication of any security lighting

☐ Manufacturer specification sheets showing "fully shielded cut off" light fixtures for all proposed lighting including photometric data that meets the requirements of KZC 115.85.2

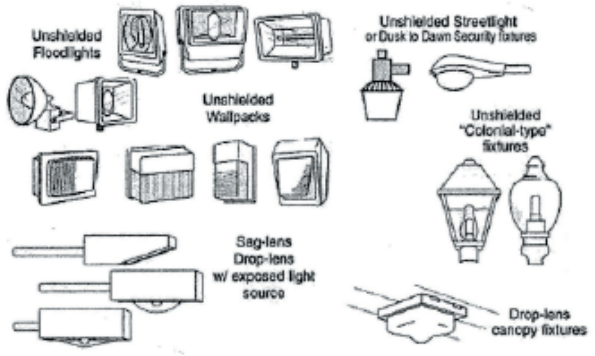
☐ If the subject property is located within 100' of a low density zone, in addition to the lighting plan requirements above, the applicant shall submit a computer generated photometric data and site plan grid indicating the following levels of illumination that will project onto the adjoining residential zone.
a) foot candle readings every 20 feet within the property or site and 15 feet beyond the property line
b) horizontal and vertical projection of photometric data that meets the foot candle and uniformity ratio illumination requirements of KZC Section 115.85.

Design of lighting fixtures

The following are examples of acceptable "fully shielded cut off" light fixtures as defined by the (IESNA).

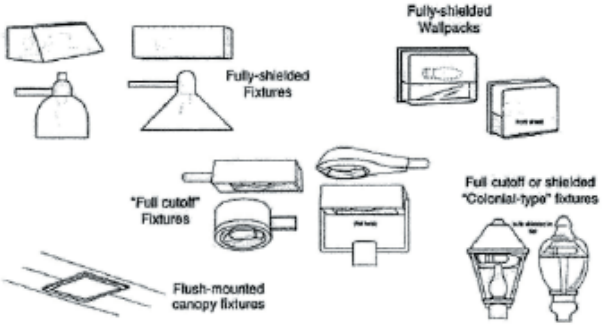
Unacceptable / Discouraged

Fixtures that produce glare and light trespass



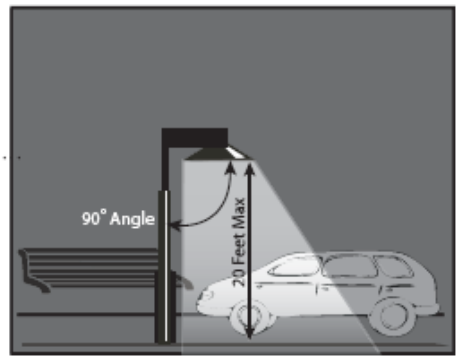
Acceptable

Fixtures that shield light source to reduce glare and light trespass and to facilitate better vision at night.



Measuring Fixure Height:

To the right is an example of how the maximum height of exterior light fixtures are measured.



(see reverse page

Rose Hill Business District
Exterior Lighting Requirements

KZC Section 115.85 Lighting Regulations (0-4030 Adopted 1/3/06):

1. General requirements - All interior and exterior lighting in any zone must comply with this section.

a. Efficient Light Sources - Energy efficient light sources shall be used in any development and use of land.

b. State Code - The requirements of the Washington State Energy Code with respect to the selection and regulation of light sources shall be complied with.

c. Glare from Subject Property Prohibited - The applicant shall select, place and direct light sources so that glare produced by any light source, to the maximum extent possible, does not extend to adjacent properties or to the right of way.

2. Exterior Lighting Requirements for the Rose Hill Business District

a. General - In addition to the requirements of Section 115.85.1 above, the following regulations contained in this section apply to all exterior lighting to be installed or modified in RH zones within the Rose Hill Business District. The intent of this section is to discourage excessive lighting and to protect low density residential zones from adverse impacts that can be associated with light trespass from non-residential and medium to high density residential development.

b. Standards - The following standards shall apply to all exterior lighting on buildings, all open air parking areas and equipment storage yards:

1) All exterior building mounted and ground mounted light fixtures for open air parking areas, including rooftop parking area light fixtures shall be directed downward and use "fully shielded cut off" fixtures as defined by the Illuminating Engineering Society of North America (IESNA), or other appropriate measure to conceal the light source from adjoining uses. Manufacturer specification sheets for the lighting fixtures including photometric data shall be included with lighting plans, and

2) All exterior lighting shall be turned off after business hours or 10:00 pm, whichever is earlier, leaving necessary lighting for site security. Outdoor lighting used for security purposes or to illuminate walkways, roadways, equipment yards, parking lots and building entrances may remain on after 10:00 p.m. provided the following are met:

a) Light fixtures are mounted to a maximum of 12' high, and

b) Site illumination does not exceed a uniformity ratio maximum of 15: 1, vertical illumination of .25 fc and horizontal luminance of .5 fc.

3) The maximum mounting height of ground mounted light fixtures in open air parking areas and equipment storage yards shall be 20'. Rooftop parking structures may have light fixtures up to 15' in height. Height of light fixtures shall be measured from the finished floor or the finished grade of the parking surface, to the bottom of the light bulb fixture.

4) The maximum uniformity ratio of the illumination on the site shall average 20:1.

5) All development proposed within 100' of a low density residential zone shall submit a lighting plan and photometric site plan for approval by the Planning Official. The plan shall meet the requirements of this section and indicate at 20 foot intervals that all site and building mounted lighting fixtures will produce a maximum initial luminance value of 0.6 horizontal and vertical foot-candles (as measured at 3 feet above grade) at the site boundary, and drop to 0.1 foot candles onto the abutting residential zoned property as measured within 15 feet from the residential zoned property line.

c. Compliance - Exterior lighting in the Rose Hill Business District must be brought into compliance with the requirements of KZC Section 115.85 in any of the following situations:

1) Replacement - The shielding requirements of KZC Section 115.85.2.b.1. shall be complied with when any nonconforming light fixture is replaced or moved.

2) Full Compliance - All other requirements of KZC Section 115.85.2 shall be complied with when there is an increase in gross floor area of more than 25 percent to any structure on the subject property.

Definitions from KZC Chapter 5:

Foot-candle - (fc): a unit of luminance amounting to one lumen per square foot.

Full Cut Off Type Fixture - A light fixture that by design of the housing, does not allow any light dispersion or direct glare to shine above a 90 degree, horizontal plane from the base of the fixture.

Light trespass - Unwanted light which, because of quantitative, directional or spectral attributes in a given contact, gives rise to annoyance, discomfort, distraction, or a reduction in the ability to see essential information.

Uniformity Ratio - Uniformity ratio describes the maximum level of illumination in relation to the lowest level of illumination for a given area. Example: uniformity ratio=4:1 for the given area, the lowest level of illumination (1) should be no less than ¼ or "4 times less" than the maximum (4) level of illumination.

CITY OF KIRKLAND
DEPARTMENT OF PUBLIC WORKS
GRADING AND BUILDING PERMIT CHECKLIST

The following is a list of items needed for review of a grading (Land Surface Modification) or building permit.

☐ 1. Use King County datum and indicate temporary or permanent benchmark used in survey.

☐ 2. Water meter location in right-of-way, size, and number (if City of Kirkland water).

3. Existing hydrant location, water main locations, and water main sizes.

☐ 4. New hydrant locations and City of Kirkland hydrant detail.

☐ 5. Standard water notes and details.

☐ 6. Show on the civil plans the PIV, double-check valve, and siamese connection for buildings that have five sprinklers.

☐ 7. New line easements for water mains on private property.

☐ 8. Existing sewer main locations and sizes.

☐ 9. New sewer main locations and slopes with minimum pipe covers.

☐ 10. Side sewer locations and slopes with minimum pipe covers.

☐ 11. Proposed developer extensions.

☐ 12. Standard sewer notes and details.

☐ 13. Location of any existing septic tanks on the project site.

☐ 14. Storm drainage hydraulic calculations for 100-year storm released at .2 c.f.s. per acre, with a civil engineers stamp (use Kirkland Department of Public Works calculation form).

☐ 15. Temporary erosion control plan protecting adjacent property, streams, and city streets.

16. Standard erosion control notes and details.

☐ 17. Permanent storm detention system with access to both ends of the tank, including profile.

18. Control manhole and flow restrictor detail with elevations and orifice size.

☐ 19. Discharge of private storm water to public storm system.

20. All downspouts and yard drainage tight-lined to private storm system.

☐ 21. All footing drains tight-lined with positive drainage when building in wet areas.

22. All drainage from paved areas to catch basins with no drainage crossing sidewalks especially at driveway entrances.

☐ 23. A downstream storm system analysis for 1/8 mile if less than 1.25 acres; 1/4 mile if more than 1.25 acres.

☐ 24. 12-inch minimum pipe diameter in right-of-way for storm drainage with trash racks on all ditch inlets 12 inches or greater for both private and public systems.

☐ 25. All right-of-way drainage designed for future extension.

☐ 26. Standard storm drainage notes and details.

☐ 27. All sidewalks require handicap ramps at intersections.

☐ 28. Street improvements showing curb and gutter, sidewalk, planter strip, right-of-way width, street width, driveway locations, and right-of-way storm drainage.

29. Street cross section showing existing street width, saw-cut line, patch width, new street width, 18-inch curb and gutter, 4.5-foot planter strip, and 5-foot sidewalk.

☐ 30. An asphalt/base cross-section for any asphalt patching or paving.

☐ 31. Street widening will need a patch taper at the end of the improvements; a 5-to-1 taper for entering traffic and a 10-to-1 taper for existing traffic.

☐ 32. Asphalt ramps will be needed on dead-end sidewalks to provide pedestrians access back out to street.

☐ 33. All existing utilities within the right-of-way, including power poles, vaults, and street lights should be shown on the plans.

☐ 34. Developers will be responsible for moving utilities in conflict with right-of-way improvements.

☐ 35. Standard right-of-way notes and details.

☐ 36. Per Notice of Approval, developer responsible for contacting Puget Power for street light design.

☐ 37. If water or sewer utilities are governed by NE Lake Washington Water and Sewer or Rose Hill Water, a sewer and/or water availability letter is needed from the involved district.

☐ 38. Show all existing or new easements on the property, including the size and type.

☐ 39. A completed Department of Public Works Improvement Evaluation Packet. These required forms are available at the Public Works Website at http://www.ci.kirkland.wa.us/depart/pw/devgroup/improvm.htm

☐ 40. Do not build over existing utility lines.

☐ 41. Prior to issuance of a permit, any concomitant agreements required due to deferment of right-of-way improvements must be signed, notarized, and returned to the Department of Public Works.

☐ 42. All new and existing street signs should be located on the plans.

☐ 43. Indicate any restriping or new striping required in the right-of-way.

☐ 44. A report by a professional engineer (per Zoning Code Chapter 85) may be required if development will occur on or within 25 feet of a regulated slope or on soft compressible soils. Two copies must be submitted.

CITY OF KIRKLAND
Planning and Community Development Department
123 Fifth Avenue, Kirkland, WA 98033 425.587-3225
www.ci.kirkland.wa.us

CALCULATING AVERAGE BUILDING ELEVATION

NOTE:

INCOMPLETE AVERAGE BUILDING ELEVATION INFORMATION COULD SUBSTANTIALLY DELAY THE PROCESSING OF YOUR APPLICATION

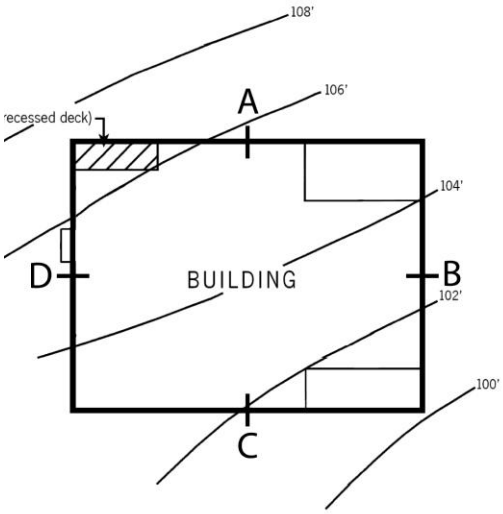
No part of a structure may exceed the maximum height above "Average Building Elevation" specified in the applicable use zone section of the Zoning Code except for minor elements of a structure as specified in Zoning Code Section 5.10.045 **defines Average Building Elevation as:**

"The weighted average elevation of the topography, prior to any development activity, either at the center of all exterior walls of a building or structure, either (Option 1) under the footprint of a building as measured by delineating the smallest rectangle which can enclose the building footprint and then averaging the elevations taken at the midpoint of each side of the rectangle or (Option 2) a second, more complicated, option for calculating Average Building Elevation is available. Contact the Planning Department at 425-587-3225 for details. When a building or structure contains townhouses or other attached but otherwise independent building units the average building elevation is calculated separately for each unit."

AVERAGE BUILDING ELEVATION FORMULA

Option 1

$$\frac{\text{(Midpoint Elevations) x (Length of Wall Segments)}}{\text{(Total Length of Wall Segments)}}$$



Site Plan
Not to scale

Calculating Average Building Elevation

$$\frac{(A \times a) + (B \times b) + (C \times c) + (D \times d)}{a + b + c + d} = \text{Average Building Elevation (ABE)}$$

Where A, B, C, D...= Existing Ground Elevation at Midpoint of Rectangle Segment*
And a, b, c, d...= Length of Rectangle Segment

Midpoint Elevation	Rectangle Segment Length
A = 105.6	a = 47'
B = 102.5	b = 40'
C = 101.9	c = 47'
D = 105.2	d = 40'

CALCULATION EXAMPLE:

$$\frac{(105.6)(47)+(102.5)(40)+(101.9)(47)+(105.2)(40)}{47 + 40 + 47 + 40} = \frac{18{,}060.5}{174} = 103.80 \text{ ABE}$$

*Rectangle shall not include those items allowed to extend into required yards through KZC 115.115(3)(d).

BEFORE SUBMITTING YOUR CONSTRUCTION DRAWINGS, CHECK TO SEE THAT YOU HAVE PROVIDED THE INFORMATION BELOW. CALL THE PLANNING DEPARTMENT TO FIND THE MAXIMUM HEIGHT ABOVE ABE FOR YOUR ZONING DISTRICT.

- The site plan and the elevation drawings must be drawn to scale, for example 1"=20'.
- Clearly show existing topography on your site plan. Topography should be shown in 2' (min.) increments.
- Submit (with the site plan) your average building elevation calculations using the formula provided on the front side of this page.
- Indicate on an elevation drawing where the average building elevation strikes the building and show the proposed ridge elevation (see below for example).
- Indicate on the **site plan** the elevation of the finished floor or garage slab.
- Indicate the **elevation** and **location** of a **fixed point (benchmark)** within the ADJACENT RIGHT-OF-WAY or other point approved by the Planning Department. The benchmark elevation and location **must** be provided and cannot be a part of the proposed structure. Note: Benchmark must be established, verified and remain during construction so height can be verified when completed.
- Include portions of the structure that are covered by roof in the ABE calculation even if they do not have walls. Cantilevered portions enclosing interior space must be included in the ABE calculation.
- Sections of the structure that are below the existing grade and do not have a wall that extends above the existing grade, are not used in the ABE calculation. Building wall segments more than 4' in height above finished grade and enclosing interior space are included in the ABE calculation.
- For additions, you must provide an average building elevation calculation for the entire structure.
- Vents & chimneys may exceed the maximum height (for detached dwelling units)

CROSS-SECTION REPRESENTATION OF ABE